

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-3. (Canceled)

4. (Currently amended) A bent flexible wiring board comprising:

a flexible insulating substrate that is bent;

first bent wiring provided on one surface of the insulating substrate;

first bent insulative protecting film, provided on one surface of the insulating substrate, for protecting the first wiring;

second bent wiring provided on the other surface of the insulating substrate;

second bent insulative protecting film, provided on the other surface of the insulating substrate, for protecting the second wiring; and

a terminal portion, provided on at least one of the first wiring and the second wiring at an end thereof, to be connected to an external electrical component,

wherein:

said first insulative protecting film and said second insulative protecting film are both premolded polymer films, respectively, and are placed to cover the first wiring and the second wiring except for at least the terminal portion, and are bonded with the insulating substrate via an adhesive, and

at least one of said first insulative protecting film and said second insulative protecting film, which is connected to the surface on which the terminal portion is provided is thinner than the insulating substrate.

5. (Original) The flexible wiring board as set forth in claim 4, wherein the insulative protecting film which is thinner than the insulating substrate has a thickness which is a half or less than a thickness of the insulating substrate.

6. (Currently amended) A bent flexible wiring board comprising:
a bent flexible insulating substrate;
first bent wiring provided on one surface of the insulating substrate;
first bent insulative protecting film, provided on one surface of the insulating substrate, for protecting the first wiring;
second bent wiring provided on the other surface of the insulating substrate;
second bent insulative protecting film, provided on the other surface of the insulating substrate, for protecting the second wiring; and
a terminal portion, provided on at least one of the first wiring and the second wiring at an end thereof, to be connected to an external electrical component,
wherein:
said first insulative protecting film and said second insulative protecting film are both polymer film, and are placed to cover the first wiring and the second wiring except for at least the terminal portion, and are bonded with the insulating substrate via an adhesive,
at least one of said first insulative protecting film and said second insulative protecting film, which is connected to the surface on which the terminal portion is provided is thinner than the insulating substrate,
said terminal portion is provided only on the first wiring, and

an end of the second insulative protecting film closer to the terminal portion, the second insulative protecting film being on a side of the substrate opposite the terminal portion, is farther away from an end of the insulating substrate where the terminal portion is provided than an end of the first insulative protecting film closer to the terminal portion.

7. (Previously presented) The flexible wiring board as set forth in claim 4, wherein a boundary portion between (a) one of the first insulative wiring board and the second insulative wiring board which is provided on the surface the terminal portion is provided and (b) the terminal portion is distanced by at least 0.2 mm from an end of a substrate of the external electrical component which is connected to the terminal portion.

8-17. (Cancelled)

18. (Currently amended) A flexible wiring board comprising:

a flexible insulating substrate that is bent;

a first bent wiring provided on one side of the flexible insulating substrate;

a first bent insulative protecting film, provided on the one side of the flexible insulating substrate for protecting the first wiring, the first wiring being provided between the flexible insulating substrate and the first insulative protecting film;

a second bent wiring provided on the other side of the flexible insulating substrate, so that the first and second wirings are on opposites sides of the flexible insulating substrate;

a second bent insulative protecting film, provided on the other side of the flexible insulating substrate for protecting the second wiring, the second wiring being provided between the flexible insulating substrate and the second insulative protecting film; and

a terminal portion, provided on at least one of the first wiring and the second wiring at an end portion thereof, to be connected to an external electrical component,

wherein:

said first insulative protecting film and said second insulative protecting film are both premolded polymer inclusive, and cover the first wiring and the second wiring except for at least part of the terminal portion, and are bonded to the flexible insulating substrate via an adhesive, and

at least one of said first insulative protecting film and said second insulative protecting film, on a terminal portion side of the flexible insulative substrate, is thinner than the insulating substrate with respect to thickness.

19. (Currently amended) A flexible wiring board comprising:

a flexible insulating substrate that is bent;

a first bent wiring provided on one surface of the insulating substrate;

a first bent insulative protecting film, provided on one surface of the insulating substrate, for protecting the first wiring;

a second bent wiring provided on the other surface of the insulating substrate;

a second bent insulative protecting film, provided on the other surface of the insulating substrate, for protecting the second wiring;

wherein a part of an end portion of at least one of the first wiring and the second wiring represents a terminal portion, said part representing the terminal portion being exposed and to be connected to an external electrical component,

wherein said first insulative protecting film and said second insulative protecting film are both premolded and polymer-based, and are placed to cover the first wiring and the second wiring except for at least the terminal portion, and are bonded with the insulating substrate via an adhesive, and

at least one of said first insulative protecting film and said second insulative protecting film, which is connected to the surface on which the terminal portion is provided, is thinner than the insulating substrate.

20. (Previously presented) The flexible wiring board as set forth in claim 19, wherein the insulative protecting film which is thinner than the insulating substrate has a thickness which is half or less than a thickness of the insulating substrate.

21. (Currently amended) A flexible wiring board comprising:

a flexible insulating substrate that is bent;

a first bent wiring provided on one surface of the insulating substrate;

a first bent insulative protecting film, provided on one surface of the insulating substrate, for protecting the first wiring;

a second bent wiring provided on the other surface of the insulating substrate;

a second bent insulative protecting film, provided on the other surface of the insulating substrate, for protecting the second wiring;

wherein a part of an end portion of at least one of the first wiring and the second wiring represents a terminal portion, said part representing the terminal portion being exposed and to be connected to an external electrical component,

wherein said first insulative protecting film and said second insulative protecting film are both polymer-based, and are placed to cover the first wiring and the second wiring except for at least the terminal portion, and are bonded with the insulating substrate via an adhesive,

at least one of said first insulative protecting film and said second insulative protecting film, which is connected to the surface on which the terminal portion is provided, is thinner than the insulating substrate,

wherein only the first wiring has said terminal portion, and

wherein an end of the second insulative protecting film closer to the terminal portion, the second insulative protecting film being on a side of the substrate opposite the terminal portion, is farther away from an end of the insulating substrate where the terminal portion is provided than an end of the first insulative protecting film closer to the terminal portion.

22. (Currently amended) A flexible wiring board comprising:

a flexible insulating substrate that is bent;

first bent wiring provided on one surface of the insulating substrate;

first bent insulative protecting film, provided on one surface of the insulating substrate,
for protecting the first wiring;

second bent wiring provided on the other surface of the insulating substrate;

second bent insulative protecting film, provided on the other surface of the insulating substrate, for protecting the second wiring; and

a terminal portion, provided on at least one of the first wiring and the second wiring at an end portion thereof, to be connected to an external electrical component,

wherein:

said first insulative protecting film and said second insulative protecting film are both polymer film, and are placed to cover the first wiring and the second wiring except for at least the terminal portion, and are bonded with the insulating substrate via an adhesive,

at least one of said first insulative protecting film and said second insulative protecting film, which is connected to the surface on which the terminal portion is provided is thinner than the insulating substrate,

said first and second wirings, which are on opposite sides of said flexible insulating substrate, are not in electrical communication with one another.

23. (Currently amended) A flexible wiring board comprising:

a flexible insulating substrate that is bent;

a first bent wiring provided on one surface of the insulating substrate;

a first bent insulative protecting film, provided on one surface of the insulating substrate, for protecting the first wiring;

a second bent wiring provided on the other surface of the insulating substrate;

a second bent insulative protecting film, provided on the other surface of the insulating substrate, for protecting the second wiring;

wherein a part of an end portion of at least one of the first wiring and the second wiring represents a terminal portion, said part representing the terminal portion being exposed and to be connected to an external electrical component,

wherein said first insulative protecting film and said second insulative protecting film are both polymer-based, and are placed to cover the first wiring and the second wiring except for at least the terminal portion, and are bonded with the insulating substrate via an adhesive,

at least one of said first insulative protecting film and said second insulative protecting film, which is connected to the surface on which the terminal portion is provided, is thinner than the insulating substrate, and

wherein said first and second wirings, which are on opposite sides of said flexible insulating substrate, are not in electrical communication with one another.

24. (Previously presented) The flexible wiring board of claim 4, wherein said terminal portion is provided on said first wiring but not said second wiring.

25. (Previously presented) The flexible wiring board of claim 18, wherein said terminal portion is provided on said first wiring but not said second wiring.

26. (Previously presented) The flexible wiring board of claim 4, wherein said first and second wirings, which are on opposite sides of said flexible insulating substrate, are in electrical communication with each other via a through hole.

27. (Previously presented) The flexible wiring board of claim 6, wherein said first and second wirings, which are on opposite sides of said flexible insulating substrate, are in electrical communication with each other via a through hole.

28. (Canceled)

29. (Previously presented) The flexible wiring board of claim 18, wherein said first and second wirings, which are on opposite sides of said flexible insulating substrate, are in electrical communication with each other via a through hole.

30. (Previously presented) The flexible wiring board of claim 19, wherein said first and second wirings, which are on opposite sides of said flexible insulating substrate, are in electrical communication with each other via a through hole.

31. (Previously presented) The flexible wiring board of claim 21, wherein said first and second wirings, which are on opposite sides of said flexible insulating substrate, are in electrical communication with each other via a through hole.

32. (Previously presented) The flexible wiring board of claim 4, wherein said at least one of said first insulative protecting film and said second insulative protecting film, which is connected to the surface on which the terminal portion is provided, has a thickness in a range of 12.5 to 25 μm .

33. (Previously presented) The flexible wiring board of claim 32, wherein a thickness of the insulating substrate is not less than 12.5 μm and not more than 50 μm .

34-35. (Canceled)

36. (Previously presented) The flexible wiring board of claim 18, wherein said at least one of said first insulative protecting film and said second insulative protecting film, on a terminal portion side of the flexible insulating substrate, has a thickness in a range of 12.5 to 25 μm .

37. (Previously presented) The flexible wiring board of claim 36, wherein a thickness of the flexible insulating substrate is not less than 12.5 μm and not more than 50 μm .

38. (Previously presented) The flexible wiring board of claim 19, wherein said at least one of said first insulative protecting film and said second insulative protecting film, which is connected to the surface on which the terminal portion is provided, has a thickness in a range of 12.5 to 25 μm .

39. (Previously presented) The flexible wiring board of claim 38, wherein a thickness of the insulating substrate is not less than 12.5 μm and not more than 50 μm .